

### **REMARKS**

Claims 1-34 are pending in the application and stand rejected.

#### **Objections to the specification**

The Examiner continues to object that the specification contains embedded hyperlinks, and requests that these hyperlinks be removed, once again citing to MPEP §608.01. Once again, Applicants note that this section of the MPEP provides that “[w]here the hyperlinks and/or other forms of browser-executable codes themselves rather than the contents of the site to which the hyperlinks are directed are part of applicant's invention and it is necessary to have them included in the patent application in order to comply with the requirements of 35 U.S.C. §112, first paragraph, and applicant does not intend to have these hyperlinks be active links, examiners should not object to these hyperlinks. The Office will disable these hyperlinks when preparing the text to be loaded onto the USPTO web database.” (emphasis added) Also once again, Applicants note that all instances of URLs in the specification noted by the Examiner are not intended to be active hyperlinks and are not provided in order to incorporate the contents of the sites to which they are directed into Applicant’s invention. Rather, the URLs in the sections identified by the Examiner are either intended to provide background material to help the reader (i.e. “the W3C standards for the RDF”) or are completely *hypothetical* URLs provided as part of examples of the operation of the claimed inventions. Applicants thus once submit that these URLs are all provided to comply with the requirements of 35 U.S.C. §112 and respectfully request that the Examiner withdraw this objection or else to provide a reasoned answer to the above arguments and a logical explanation for this continued rejection.

#### **Rejection under 35 U.S.C §102**

Claims 1-34 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2004/0244012 to Massarenti. In particular, the Examiner finds that, with regard to claims 1 and 26, Massarenti discloses all of the claimed limitations and specifically alleges that Massarenti discloses serializing each of multiple statements in ¶[0032]; using a digital

processor to independently compute a hash value for each of the multiple statements in ¶[0041]; and applying a commutative function to each hash value, to obtain an aggregate hash value representing all of the multiple statements in ¶[0048]. Applicants respectfully disagree.

Massarenti's ¶[0032] teaches that:

FIG. 2 illustrates an exemplary signature-tagging serialization paradigm 200. Signature-tagging serialization paradigm 200 includes originating entity 102, destination entity 104, communication channel 106, and a signature scheme 202. As illustrated, originating entity 102 includes a graph of objects 204 and serialization (procedure block) 206. Destination entity 104 includes a new graph of objects 214 and deserialization (procedure block) 216. Communication channel 106 includes a serialized binary blob 218 that is accepted at communication channel 106 from originating entity 102 and that is provided from communication channel 106 to destination entity 104.

There is clearly no discussion whatsoever in this paragraph of serializing beyond the mention of “serialization (procedure block) 206.” Not wanting to be remiss in their duty, Applicants have perused the entire Massarenti disclosure to learn as much as possible about this serialization (procedure block) 206, and found out in [0043] that

Graph of objects 204 is serialized by serialization 206 with reference to signature table 212.

At [0037] Applicants further learned that

Signature table 212 associates each object type of type system 208 with a type signature.

Type system 208 is described at [0034]:

Type system 208 presents, enumerates, or otherwise describes defined types (e.g., classes) for objects that may possibly be instantiated or otherwise used in a given environment or subset thereof.

However, most importantly, at [0043]-[0044] Applicants further learned that

...Graph of objects 204 is serialized by serialization 206 with reference to signature table 212. Specifically, for each object in graph of objects 204, the object type thereof is used to access signature table 212 and ascertain an associated type signature therefrom.

When serialization 206 constructs serialized binary blob 218 from graph of objects 204 and signature table 212, serialization 206 inserts the associated type signature into serialized binary blob 218 to tag/indicate the type of each object being serialized. An exemplary serialized binary blob 218 having a type signature tag is described further below with reference to FIG. 6. After serializing the objects of graph of objects 204 into serialized binary blob 218, originating entity 102 transmits serialized binary blob 218 over communication channel 106. [emphasis added]

Thus, Massarenti clearly does not serialize each of multiple statements; rather, Massarenti serializes all statements (objects) that form graph 204 into one single binary blob. As those skilled in the art know, a binary blob is essentially an object file. This definition and interpretation is reinforced through the Massarenti specification by the repeated reference to “*the* serialized bit-stream.” Thus, Applicants submit that contrary to the Examiner’s interpretation, Massarenti does not in fact disclose serializing each of multiple statements, as per the present claims.

The Examiner next cites to ¶ [0041] for allegedly teaching using a digital processor to independently compute a hash value for each of the multiple statements. This paragraph in actuality reads:

In a hashing implementation that is described further below, the name of a particular object type, the particular object type's place in the type system hierarchy, and the number and kinds or types of member fields of the particular object type are used to create/generate a 32-bit value. This 32-bit value is stored in association with the particular object type in signature table 212. The associated 32-bit value is used to tag instances of the particular object type during a serialization procedure.

Applicants submit that there is obviously nothing in this paragraph that even faintly alludes to independently computing a hash value for each of multiple serialized statements, other

than a vague mention of “a hashing implementation that is described further below.” Looking further below, Applicants found an exemplary serialization in a hashing implementation described at paragraphs [0111] through [0137]. The only mention of a hash value in this entire section is with reference to the type signature that is stored in the signature table 212 noted above. This is further reinforced by the “exemplary signature table creation in a hashing implementation” described at paragraphs [0094] through [0110], which describe how the type signatures of the signature table 212 are created with a hashing algorithm “that is responsive to the structural properties of different object types.” (§[0095]) There is no other use of this hashing algorithm anywhere else in the method of Massarenti and Applicants respectfully invite the Examiner, should he persist in this point of view, to cite to a specific paragraph that *explicitly* teaches computing a hash value *for each of multiple serialized statements*.

The Examiner finally cites to §[0048] for purportedly teaching the applying of a commutative function to each hash value to obtain an aggregate hash value representing all of the multiple statements. In actuality, this paragraph states:

Exemplary signature-tagging serialization paradigm 200 (of FIG. 2) includes multiple components, each of which may be implemented using hardware, software, firmware, some combination thereof, and so forth. This section addresses graph of objects 204, signature table 212, serialized binary blob 218, and an exemplary structural representation for an object type of type system 208. Exemplary components for serialization 206, signature table creation 210, and deserialization 216 are described further below with reference to a hashing implementation.

Applicants are truly at a loss as to what in this section is understood by the Examiner as being synonymous with the applying of a commutative function to each hash value to obtain an aggregate hash value representing all of the multiple statements. Applicants have further reviewed the entire Massarenti reference with great care but simply cannot find anything akin to the application of a commutative function to multiple hash values to thereby obtain an aggregate hash value. Of course, this makes sense given that, as noted above, Massarenti only uses hash values to derive signatures that are then used in creating a single serialized bit-stream.

In light of all of the above, Applicants respectfully submit that claims 1 and 26 are in fact novel and nonobvious over the art on record, and respectfully request the Examiner to kindly reconsider and pass claims 1 and 26 to issue.

Applicants further submit that the above discussion is equally probative of the novelty and nonobviousness of independent claims 12, 16, 21, 29 and 33 because of the lack of anticipation in Massarenti of the various claimed limitations. Applicants thus respectfully submit that claims 12, 16, 21, 26, 29, and 33 are likewise novel and nonobvious over the art on record for the same reasons advanced above.

Claims 2-11, 13-15, 17-20, 22-25, 27-28, 30-32 and 34 depend variously from claims 12, 16, 21, 26, 29, and 33. Thus, Applicants respectfully submit that claims 2-11, 13-15, 17-20, 22-25, 27-28, 30-32 and 34 are likewise novel and nonobvious over the art on record at least by virtue of their dependencies.

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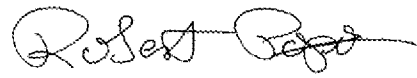
In view of the above, Applicants submit that the application is now in condition for allowance and respectfully urge the Examiner to pass this case to issue.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 08-2025. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 08-2025.

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Respectfully submitted,



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